

LEIBER, J. et al.

Appl. No. 10/030,474

Response to Office Action dated June 10, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:C -
Claim 1 (Canceled).

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Claim 2 (Currently Amended): The data storage medium as claimed in claim 10,
wherein the polymer film is wound in a plurality of polymer film plies through which
information can be read from a preselected polymer film ply and, optionally, written to a
preselected polymer film ply.

12
Claim 3 (Previously Presented): The data storage medium as claimed in claim 2,
wherein an adhesion layer is disposed between each pair of adjacent polymer film plies.

13
Claim 4 (Previously Presented): The data storage medium as claimed in claim 3,
wherein the refractive index of the adhesion layer differs only slightly from the refractive index
of the polymer film.

18
Claim 5 (Currently Amended): The data storage medium as claimed in claim 17,
wherein the refractive index of the polymer film can be changed locally by heating.

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Claim ¹⁹6 (Currently Amended):The data storage medium as claimed in claim ¹⁷19

[[5]], wherein the polymer film is assigned an absorber which is set up at least partly to absorb a write beam and to emit the generated heat at least partly, locally, to the polymer film.

Claim ¹7 (Currently Amended):

A process for producing a data storage medium including an optical information carrier which comprises a spiral-wound polymer film, the central area of the data storage medium being provided with a recess whose periphery is formed by the innermost winding of the polymer film as claimed in claim 1, the process comprising spirally-winding the polymer film onto a winding body and subsequently withdrawing the winding body from the central area of the data storage medium.

Claim ²8 (Previously Presented):

The process as claimed in claim ¹7, wherein the polymer film is provided on one side with an adhesion layer which faces outward when the polymer film is wound onto the winding body.

Claim ⁷9 (Currently Amended):

The use of the data storage medium as claimed in claim 1 in a drive which is attuned to it and comprises a read device and, optionally, a write device, the read device and the optional write device being disposed in a the recess in the central area of the data storage medium and being moved relative to the data storage medium, while the data storage medium is stationary, for the purpose of reading and/or writing information, wherein the data storage medium includes a spirally-wound polymer film having an optical property that can be changed locally by heat, the central area of the data storage medium

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containing no winding core so as to provide the recess, the periphery of the recess being formed by the innermost winding of the polymer film, wherein the data storage medium further comprises an absorber for absorbing the heat and subsequently emitting at least part of the absorbed heat to the polymer film.

C/ ¹⁴ Claim ~~10~~ (Currently Amended): The data storage medium as claimed in claim ~~21~~ ¹⁰

[[1]], wherein the polymer film comprises biaxially-oriented polypropylene.

¹⁵ Claim ~~11~~ (Currently Amended): The data storage medium as claimed in claim ~~21~~ ¹⁰

[[1]], wherein the polymer film comprises polymethyl methacrylate.

⁴ Claim ~~12~~ (Previously Presented): The process as claimed in claim ~~7~~ ¹ wherein the

winding body comprises a cylindrical winding body.

⁵ Claim ~~13~~ (Previously Presented): The process as claimed in claim ~~7~~ ¹ wherein the

winding body comprises a spiral-like outer contour.

⁶ Claim ~~14~~ (Previously Presented): The process as claimed in claim ~~13~~ ⁵ wherein the

spiral-like outer contour includes a step portion.

³ Claim ~~15~~ (Previously Presented): The process as claimed in claim ~~8~~ ² wherein the

winding body comprises a spiral-like outer contour having a step portion with a size corresponding to the combined thickness of the polymer film and the adhesion layer.

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Claim ~~16~~ (Previously Presented): A method for using a data storage medium

including an optical information carrier which comprises a spiral-wound polymer film, the central area of the data storage medium being provided with a recess whose periphery is formed by the innermost winding of the polymer film, the method comprising:

disposing a read device having a read beam in the recess of the data storage medium; and
moving the read device while keeping the data storage medium stationary in order to direct the read beam onto data storage medium to read data therefrom.

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Claim ~~17~~ (Previously Presented): The method as claimed in claim ~~16~~ wherein the

read device is part of a read/write device that also has a write beam, and the method further comprises:

moving the read/write device while keeping the data storage medium stationary in order to direct the write beam onto the data storage medium to write data thereto.

[Claim 18 (Canceled).

17
Claim ~~19~~ (Currently Amended): The data storage medium as claimed in claim ~~18~~ 14,

wherein the information carrier comprises a polymer film.

20
Claim ~~20~~ (Previously Presented): The data storage medium as claimed in claim ~~19~~ 17,

wherein the polymer film comprises a polymer film having an optical property that can be changed locally by heat.

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Claim 21 (Currently Amended): A The data storage medium including a spirally-wound polymer film having an optical property that can be changed locally by heat, the central area of the data storage medium being provided with a recess which contains no winding core and whose periphery is formed by the innermost winding of the polymer film as claimed in claim 20, wherein the data storage medium further comprises comprising an absorber for absorbing the heat and subsequently emitting at least part of the absorbed heat to the polymer film.

[Claim 22 (Canceled).

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Claim 23 (Currently Amended): A The data storage medium including a spirally-wound information carrier, the central area of the data storage medium being provided with a recess which contains no winding core and whose periphery is formed by the innermost winding of the information carrier, wherein the information carrier is spirally-wound so as to provide a plurality of plies and as claimed in claim 22, further:

an adhesion layer is disposed between adjacent plies of the information carrier.

21
Claim 24 (Previously Presented): The data storage medium as claimed in claim 23, 16
wherein the adhesion layer comprises acrylate adhesive.

22
Claim 25 (Previously Presented): The data storage medium as claimed in claim 23, 16
wherein the adhesion layer comprises acrylate adhesive mixed with an absorber dye for absorbing heat.

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Claim 26 (Currently Amended): A memory device comprising:

C/ a data storage medium including a spirally-wound information carrier, the central area of the data storage medium being provided with a recess which contains no winding core and whose periphery is formed by the innermost winding of the information carrier, wherein the information carrier is spirally-wound so as to provide a plurality of plies as claimed in claim 22;
and

a read head provided in the recess for reading data from the spirally-wound information carrier by focusing a light beam on selected individual plies.

24
Claim 27 (Previously Presented): The memory device according to claim 26, wherein data is read by moving the read head and keeping the data storage medium stationary. 23

25
Claim 28 (Currently Amended): A memory device comprising:

a data storage medium including a spirally-wound information carrier, the central area of the data storage medium being provided with a recess which contains no winding core and whose periphery is formed by the innermost winding of the information carrier, wherein the information carrier is spirally-wound so as to provide a plurality of plies as claimed in claim 22;
and

a read/write head provided in the recess for reading data from and writing data to the spirally-wound information carrier by focusing a light beam on selected individual plies.

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Claim *29* (Previously Presented): The memory device according to claim *28*, wherein

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data is read or written by moving the read/write head and keeping the data storage medium stationary.
